THE COTTON INDUSTRY

By Elijah Helm

If there be one British industry which is entitled to receive more careful attention than all others, in the course of the present “fiscal inquiry,” it is the cotton manufacture. That industry provides the means of livelihood, directly and indirectly, for vast multitudes of our people, and its greatly diversified productions supply the most important class of merchandise by which payment is made for the food and other valuable forms of wealth brought to this nation from beyond the seas. It is also, as I shall presently show, the chief instrument by which the protectionist policy of other countries is largely overcome and made innocuous to us.

The entire value of the cotton manufactures of every description produced in the United Kingdom is about £100,000,000 per annum, of which £29,000,000 is retained for home consumption and £29,000,000 is exported to India and the Colonies, leaving approximately £42,000,000, representing the
value of the cotton manufactures finding markets in foreign countries. This last item constitutes about one-sixth of the whole of the exports of British productions sent from our ports in the course of a year to all destinations.

Now, considering that the British cotton industry is of the nature of an exotic, in that its principal raw material is drawn from sources thousands of miles distant from the seat of manufacture, and considering also that the entrance of its products into some of the wealthiest nations is impeded by high customs duties, it is surely a proof of singular vitality and efficiency that it should be able to sell more than 70 per cent. of its manufactures in competition with the rest of the world, and in defiance of the barriers which so many countries interpose against them. In comparison with this huge export trade in cotton goods, that of every other nation falls into insignificance. To what is this supremacy due?

It is due, no doubt, to various causes. Foremost among them, however, is the fact that our Free Trade system enables us to manufacture cotton goods at a lower cost than is possible in any protectionist country. That the cost of production is less in Great Britain than elsewhere can be shown in detail by a comparison of the items entering into it, in particular cases. But we need not follow so tedious a process, since there is at hand a less complicated, and perhaps a more convincing, proof of
the competitive superiority of the British cotton industry, the validity of which can be tested by any one who is acquainted with, or has access to, the published statistics of international trade.

**Triangular Trade.**

Take the case of France. She imports large quantities of raw silk, and other products from China, Japan, India, and Turkey. Yet the amount of merchandise exported from France to these countries in return is extremely small, and assuredly she does not send them gold. How, then, does France pay for these liberal imports from the regions I have mentioned? She pays for them indirectly, not by means of her own productions, but by sending her wine, her silk goods, her gloves, and her artistic manufactures to Great Britain; and Great Britain settles the account by exporting her manufactures, chiefly cotton goods, to the countries in question. Now, clearly, if France were able to supply to them the things they chiefly need, viz., cotton manufactures, at prices as low as they can be obtained from England, she would not need to employ, as in fact she does, the cotton looms of Lancashire in order to furnish the means of payment to China, Japan, and Turkey, for the raw silk which she receives from them.

Another striking example. The United States, notwithstanding their wonderful variety of climate,
soil and other resources, import immense quantities of tropical produce from China, Japan, India, Africa, South America, and the West Indies. But their direct exports to these regions fall short by several millions sterling of the value of the imports thence to the United States. Here again the chief means employed to adjust the account is the export of cotton goods of Great Britain. Other methods of adjustment are, of course, adopted in addition. Yet the remarkable conclusion remains that the United States do not pay for more than a comparatively small portion of the merchandise they import from these sources by sending them American products, because they cannot produce the kinds of goods which such countries want at prices as low as those goods can be obtained from British manufacturers.

These illustrations of the indirect or roundabout methods of international trade are very instructive, and any one may easily verify them by reference to the official trade statistics of Great Britain, the United States, and France. Others of like tenor may be discovered by any student who may care to investigate the currents of commerce between country and country with a view to finding out the ways in which international trade balances are settled. But from the present point of view the most important practical lesson which they teach is this: that however successful the great protectionist countries may be in lessening their
imports of manufactures from Free-Trading Great Britain, they are obliged after all, and mainly because of their protectionist policy, to use—indirectly, of course, and unintentionally—British manufactures for the purpose of discharging the debts which their necessities require them to contract with other countries. The chief instrument by which these debts are paid is British cotton manufactures.

A NEW COMPETITOR.

This fact is of the utmost importance in considering the question with which we are now confronted, whether or not the British nation should cast aside the practice of purchasing without fiscal impediment the materials and accessories of its industries at the lowest possible prices wherever in the world they may be found.

But before proceeding further it is incumbent to examine the very formidable competition which the British cotton industry has met with during the last ten years in the Southern States of the American Union. According to the official census of 1879–80 there were 12,360 power looms in the cotton mills of the Southern States. But in 1900–1 these had increased to 122,902, and the number is now considerably greater. Within the same interval the number of spinning spindles grew from 561,360 to 5,819,835. At first the production of manufactured goods was entirely consumed at home, but within
the last fifteen—and particularly within the last ten—years, the Southern mills have been making cotton cloth for export, chiefly to China, in the northern part of which—especially in Manchuria—they have forced their way with little difficulty, even against English and North American goods of like kind, in almost constantly increasing quantity. These cloths—called “drills” and “sheetings”—are, however, only a small group amongst the coarser and heavier kinds, and the Southern manufacturers have not been able to compete either with those of the North-eastern American States or of England in respect of other descriptions.

The secret of their success is not proximity to the source of cotton supply. The cost of transporting raw cotton to the Northern mills, and to Lancashire, which is about the same in both cases, is little greater than that of conveying it to the manufacturing districts in North and South Carolina. The secret lies mainly in the utilisation of a previously neglected source of factory labour supply in the Southern States. The emigration from North to South, since the close of the Civil War, more than thirty years ago, of many white settlers on the land created a considerable population of small farmers from which the labour force of the Southern cotton mills is now drawn. The negro population is not engaged in cotton mill operations. Hitherto the workpeople thus tempted from the land to the factory, have been content to work at very
much lower rates of wages than those paid in the Northern mills or in Lancashire. Moreover, in the absence of State factory laws in the Southern States, the hours of daily labour are inordinately long, and therefore the fixed-charges item in the cost of production has hitherto been exceedingly low. The piece-rate wages in the South for weaving a particular description of cloth are not much more than one-fourth of those paid at Fall River, Massachusetts, or at Blackburn, in Lancashire. This example is a fair illustration of the exceptional and temporary advantage which the Southern manufacturers possess in respect of the cost of labour. Again, the building of cotton mills in the South has been artificially stimulated by free grants of land, by exemption from taxes, and by other expedients proceeding from local enthusiasm and pride in the creation of new industries on the spot. This again must be reckoned a passing and adventitious benefit.

SPECIAL CIRCUMSTANCES OF THE SOUTHERN STATES.

It is right to dwell upon this remarkable development in the Southern States, because it may be thought to conflict with the statement that the cotton industry of the United Kingdom is the most efficient of its kind in the world. Two things must be observed, however. In the first place, the new
competition is confined to a few coarse descriptions of goods which are not extensively produced in England. It concerns much more the cotton manufacturers of the North American States, and they, to judge from recent authentic reports, are not afraid of the further increase of Southern competition. They have good reason. For, secondly, it is inconceivable that rates of wages so greatly below the standard current in the North can long prevail in the Southern cotton mills. Moreover, there are indications that the supply of cheap labour in these mills is becoming exhausted, since the manufacturers are now compelled to employ an astonishingly large proportion of children, some of them of tender years. It is impossible to believe that American public opinion will long tolerate the absence of factory laws in the South such as those which exist in the North. Finally, the cotton trade-unions are at work in the South, and their efforts, combined with the other forces tending to equalise industrial conditions as between North and South, must assuredly result in the disappearance of the special advantages in respect of the cost of labour which have done so much to extend the cotton industry of the South.

This competition of the American Southern cotton mills with those of our own country is the only serious instance of successful substitution of foreign for British goods in recent years, and, as already stated, it is confined to a class of coarse manufactures
not now extensively made in this country. The spinning mills of India have, no doubt, reduced to very small dimensions the export of coarse English cotton yarn to China and to India itself, but that is not a modern innovation. In like manner the yarn spun in the Japanese mills has made the competition of English yarn in the Far-Eastern markets much more difficult for our spinners. With these exceptions, however, the business of producing cotton yarns and goods for export remains still in the hands of British manufacturers and merchants. In other countries the industry, however greatly it may have increased within the last twenty-five or thirty years, is still for the most part a home-market industry, and so long as the advantages we possess are retained, especially that of low cost of production, there is no ground at present visible to anticipate that we shall lose the position we now hold of being the main suppliers of cotton goods to markets outside the sources of production.

Cheap Materials and Accessories.

It must, nevertheless, be acknowledged that at times foreign competition with certain descriptions of our own cotton manufactures is perceptibly keen, especially when the home markets of the various foreign countries are depressed, and unable to take off the full home production. This fact is a plain indication that the margin of advantage which we
possess is not so great as to warrant any trifling with it by increasing the cost of production.

We are thus brought round again to the question, How would the abandonment of Free Trade affect the British cotton industry? It has been shown that foreign nations which put high duties on British manufactures are, in effect, compelled to employ our cotton goods as a means of paying for the produce which they import from third countries, because cotton goods are the form of payment which is chiefly preferred, and indeed insisted upon. These protectionist countries partially exclude British cotton goods from their own home markets, but they cannot prevent our goods from being used in order to pay for their imports, because British cotton goods are cheaper than those which these protectionist countries produce.

Why are they cheaper? Partly, no doubt, because the English cotton industry is excellently organised; partly also because the moist English climate is favourable to the spinning and weaving of cotton. But over and above these advantages—and this consideration applies to British industry generally—it is enabled to purchase at lower prices than its competitors in protectionist countries the materials and accessories required in the various processes. Raw cotton is not the only material consumed in the industry. Large quantities of leather, dyeing and bleaching requisites, iron and steel, oil, tallow, flour and other farinaceous sub-
stances, besides many minor accessories, are required. It may, perhaps, be thought that these are trifling items in the cost of production. They are, it is true, subordinate to that of the price of raw cotton, but they are collectively by no means of small importance. On the contrary, the advantage which British cotton spinners and manufacturers enjoy from being able to buy their machinery, their iron and steel, their bleaching and colouring materials, and, in short, all the requisites of their industry, at lower prices than their rivals abroad, is often a decisive advantage in practical competition.

It must, however, be parenthetically acknowledged that in one respect the English cotton industry has long been heavily handicapped by the anomalies of our patent law. The subject is much too complicated to be adequately dealt with in a paragraph. It is, however, quite true that the industry has suffered greatly within the last twenty-five years from the fact that it has had to pay higher prices for patented coal-tar colouring matters than its competitors in any other country, and that this disadvantage is directly traceable to the imperfections of British patent law. I refer to this subject now, only for the purpose of strengthening the argument that the cheapness of the accessory materials of the industry is of the greatest importance in promoting its success. The excessively high prices which British printers and dyers of textile fabrics have been compelled to pay for certain
colouring materials and other chemical products required in their industry have been an appreciable clog upon their progress, and they supply one of the reasons for the occasional success of continental producers in competing with us for the supply of coloured textile fabrics in foreign markets. Such incidents as this tend, however, to support the general argument that to be able to obtain the principal and accessory materials required in industrial operations at the lowest prices current in any part of the world free from fiscal obstruction is one of the main causes of the supremacy of the British cotton industry.

But it may be answered: "No one is proposing to tax the materials of industry, and especially of the cotton industry, the maintenance of which is so essential to the prosperity of the nation." That is not quite accurate. Even the small duty on wheat and other farinaceous substances which has recently been removed would, if it had been continued, have added perceptibly to the cost of production in the cotton industry. I know one company—a very important one—upon which it would have imposed an additional expenditure of nearly £4,000 per annum. I do not think it necessary to discuss the question of the incidence of the corn duty. Owing to market fluctuations and other temporary influences a new duty may not always lead at once to a rise of price. But a tax upon any material is an addition to the cost of production,
and distribution, and after the ultimate adjustment the consumer must pay it. In like manner a lessening of the cost of production must sooner or later reach the consumer, although it may be detained on its way to him.

**A Privilege to Selected Persons.**

To come to the larger question. It is quite true that Mr. Chamberlain and his supporters repudiate the idea of taxing raw materials. But we have been clearly told that they intend to tax food and manufactured articles, and in so doing they must abandon Free Trade.

Now what is the essential principle of Free Trade? It is this—that Parliament may impose a duty on any imported commodity provided that the public Treasury shall receive the whole of the benefit resulting from its imposition. No private person must have a share in it. To violate this principle is to give a privilege to selected individuals or classes at the expense of the whole community. But such privilege is not only inequitable and unjust, it is also, as all experience goes to prove, economically wasteful; and once established, it is certain to extend.

The inevitable tendency of Protection to spread is abundantly demonstrated in the fiscal history of all countries where it has become systematic. The extension of a privilege bestowed upon one, or a few industries, to many others, is justified by the
sentiment of equality, which demands that when the State has granted a privilege to one industry it should not be denied to another. For this reason Free Trade requires that whenever a customs duty is put upon an imported commodity an equivalent excise duty should be placed upon those home productions which compete with it, or which may be substituted for it. Only in this way can the public Treasury be sure of receiving the whole of the advantage resulting from the imposition of the customs duty.

The bearing of these considerations upon the general cost of industrial production is obvious and weighty. The singular advantage which British manufacturers have enjoyed during the last fifty years over their foreign competitors is that they have been able to purchase at lower prices all the principal and accessory materials required in their businesses. But, as we have already seen in the case of the cotton industry, this advantage has been of essential service in enabling us to compete successfully in the world’s markets, and to overcome the obstacles placed in the way of our direct exports to protectionist countries. These shut out, not entirely, but in greater or less degree, our manufactures from their own markets, but the means which they employ for this purpose have the effect of so far raising their own cost of production that they are compelled to hand over to us the business of making goods to be used in paying for their
imports from other parts of the world. This important, and perhaps unintended, consequence of protectionist policy in foreign countries—the artificial enhancement of the cost of production—is more far-reaching and extensive in its scope than is commonly supposed.

Dumping.

We are told that imported raw materials are not to be taxed under the proposed new fiscal scheme. But what is a raw material? Much the largest proportion of the £100,000,000 worth of "manufactures" now imported duty free annually into the United Kingdom is used in British industries instrumentally for further production. Probably not less than 80 per cent. of such imports is thus consumed. It goes without saying that such materials are sold to us at very low prices, or they would not be imported; and the benefit thus accruing to our industries as a whole is all the greater because of the prevalence of systematic Protection amongst our manufacturing competitors in other lands. Whenever they have a surplus of any commodity which cannot be disposed of at the high home prices resulting from Protection, relief is obtained by exporting the surplus.

Under natural conditions, that is to say under a Free Trade system, the weight of the excess would tell equally upon home and export prices. But the very object of Protection being to keep up the
home price, the surplus is sent abroad: And since the United Kingdom offers the only great and unobstructed market for anything good and cheap, these surplus commodities are sent to our ports, to the advantage of our industries, which can use them as means of reducing the cost of their final products. Examples of this kind abound in many departments of manufacture, and they are not absent from the cotton industry. Take the extreme case of woven piece goods. If these can be obtained at "dumping" prices from abroad because of temporarily excessive production as they come from the foreign loom, they furnish cheap raw material for the British dyer, bleacher, printer, or finisher. And even when they are received at dumping prices in the finally finished state, they become the raw material of the great clothing industries, such as those of Leeds or Manchester, which employ altogether thousands of British workpeople.

The thought may perhaps occur to the critical mind—"Yes, it is quite true that wherever these 'dumped' commodities can be thus utilised they are industrially beneficial; but they must injure the home producers of like commodities at all events so long as they are being imported." The answer is that these producers also are advantaged by having access to the cheapest markets for the materials which they consume. The benefit is thus general, and is highly favourable to the success of our
THE COTTON INDUSTRY

industries as a whole. There is also the further consideration that the temporary disadvantage of having to meet the competition of cheap imported commodities is not essentially different from that resulting from excessive home production. If manufacturer A. has accumulated a stock which he cannot sell at current market rates, and wants to get rid of it, he must "break the price" to the hurt of his neighbour, manufacturer B., who is in the same branch of business, but is under no such necessity. In both cases the effect is the same, a lowering of prices due to excessive supply. Both cases alike are consequently to be treated as incidents of competition involving, no doubt, individual trouble and loss for the time being, but not calling for heroic remedy in either of them.

* THE FOUNDATION OF OUR SUCCESS.

I hope I have succeeded in showing that the British cotton industry, the greatest manufacturing industry in this country, is largely dependent for its success upon the Free Trade policy under which it has made such wonderful progress during the last half-century. It still holds its foremost place as a producer for the markets, not only of this country, but also of the whole world. Judged by partial and misleading criteria, the progress of some foreign cotton industries seems to have been much more rapid than that of our own. They have outstripped us, for example, in the rate at which their consump-
tion of raw cotton, as stated in weight, has grown during the last thirty years. But that is a very unsafe standard. The proportion of cotton used per spindle in England, not the aggregate consumption, has long been gradually lessening because our mills have been producing finer and finer yarn every year. The progress of mankind in wealth and refinement has vastly increased the demand for superior, more varied, and more tasteful cotton fabrics, requiring for their production finer yarns. For the spinning of these, and in a large degree for the weaving and finishing of the superior fabrics, our climate and the training and skill of our managers and workpeople, as well as the industrial and commercial organisation of the British cotton trade, have proved themselves admirably adapted. Of these we cannot be easily deprived. But there are the further inestimable advantages resulting from our unique fiscal system which it has been the main object of this essay to justify. These advantages are threatened by the agitation recently sprung upon the country in the name of “fiscal reform.” They may be lost, unless those who are inclined to accept incontinently the representations of the “reformers” insist upon submitting them to careful and searching investigation.

Let no one be deceived by the half apologetic phrases by which the new proposals are advocated. We are told that it is not Protection, but only a “modification” of Free Trade which is aimed at,
as if it were possible to modify our fiscal system, in the manner suggested, without instantly abandoning Free Trade. Protestations of this kind are familiar enough to those who have made a study of customs tariff history.

All sorts of plausible pretexts have been urged as excuses in the beginning of high protectionist movements. But the unfortunate and fatal fact is that when once the system of privilege known as Protection has gained a foothold, it inevitably mounts to formidable proportions, and cannot be eradicated except under the pressure of some national disaster such as the distressful famine which settled the fate of the Corn Laws. To open and avowed Protectionists this argument is rather welcome than repellent. They rejoice in the persistent vitality of Protection and in its inevitable tendency to cover the whole field when the plant has been allowed to take root. To them, therefore, it is not addressed, but to those British citizens whose minds are open, and who are prepared to weigh carefully the evidence pro and con, before committing themselves one way or the other upon the most momentous national issue which has been presented to the British people for many a generation.

The principle which it has been the main purpose of this essay to demonstrate is obviously of much wider application than is here given to it. If unimpeded access to the cheapest sources of supply for industrial materials is a vital factor in the main-
tenance of the British cotton manufacture. It must be important, if not essential, to the success of many others of our industries. It is, indeed, the chief foundation of the industrial prosperity of these little islands in the northern corner of Europe. It is a hidden foundation, in the sense that it needs some thought in order to perceive its essential importance to the economic welfare of our country. But it is not the less real. The principle was clearly set forth by Sir Robert Peel in a speech addressed to the House of Commons on July 6, 1849, when he pointed out that "the best way to compete with hostile tariffs is to encourage free imports," and that the injury done to us by foreign tariffs can best be combated "by buying that of which you stand in need in the cheapest market." These words are just as true to-day as when they were spoken.
THE WOOLLEN INDUSTRY

By Sir Swire Smith

THE wool industry is the oldest of the textile industries of Britain, and was introduced by the Flemings, at or near Norwich, early in the fourteenth century. For long years prior to that time the country was an exporter of wool. "The ribs of people throughout the world," wrote Matthew Paris, "are kept warm by the fleeces of English wool." So important did the woollen industry become that at the close of the seventeenth century it is stated that the production of wool and its manufactures constituted the "most solid foundation of the national prosperity and riches." At this time Norwich was the largest city in the kingdom next to London. To use Macaulay's phrase, it was then "the chief seat of the chief manufactures of the realm." At that time, of course, the manufacture of wool was a hand industry. The slow and tedious processes of combing, carding, spinning, and weaving were

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conducted mainly in the dwellings of the operatives. The yarns and pieces were dyed in small establishments, and the distribution of the raw material and the collection of the manufactured product were carried on by means of pack-horses and primitive waggons. Britain in those days was hardly in advance of India and other Eastern countries in its manufacturing development, and our manufacturers periodically suffered terribly from their competition, as our ships brought their cotton and silk products to this country.

**EARLY INVENTORS.**

A complete change was effected by the inventions of Hargreaves, Arkwright, and a few others, beginning about 1770. These inventions, though first applied to the spinning of cotton, were soon adapted to wool. Naturally these early machines were of a very primitive character, but they served. In place of hand labour carried on in cottages, small factories were started in which "gin-horses" were introduced to propel the newly-invented machinery. Next came water power, about 1790, and at about the same date James Watt's steam engine began to be successfully applied to the machinery, and thus the factory system, so marvellous in its influence upon the destinies of the human race, was inaugurated. The power loom was invented by the Rev. Dr. Cartwright in 1785. For a time Norwich continued to be the acknow-
ledged wool centre, but the industry had taken root in the West Riding of Yorkshire, and the earliest factories were erected in that county. During the transition from hand methods to machinery the trade was placed in constant peril by strikes and riots, which broke out on the introduction of every mechanical improvement dispensing with hand labour. These demonstrations were successfully resisted in the north, but in Norwich there was a refusal on the part of those most interested to depart from the antiquated methods of the past, although hard pressed by competition. For any one in the beginning of the last century to attempt to set up machinery in Norwich was to venture his life. This resistance to improvement stripped the illustrious city of its manufacturing prestige, and many of the misguided and distressed artisans were glad to accept employment in northern towns as minders of the very machines whose admission to their own city they had so blindly and resolutely refused.

The next great step in the wool manufacture was the invention of wool-combing machinery, of which the germ was supplied by Dr. Cartwright in 1790 and perfected in a series of machines by Heilmann in 1846, and during the next few years by Holden, Lister, Donisthorpe, Noble, and others. All the most important machines, with the exception of the Jacquard fancy loom, by Jacquard, of Lyons, in 1801, and the combing machine by Heilmann, were
of British invention and construction, and the main improvements since those dates have been the outcome of British ingenuity embodied into practical shape by British machine makers.

But until the repeal of the Corn Laws, the commercial progress of the country was very slow, and but imperfectly indicated its potential importance. The poverty of the masses was appalling. Agricultural labourers were in a chronic state of semi-starvation; factory operatives had hard work and little pay; among the manufacturers there were periodical panics, over-production, and failure to meet engagements, while the condition of the masses in other countries was no better. The Free Trade measures of 1846 opened up a new era for Britain and the world. The policy of the Open Door enabled us to offer cheap manufactures in exchange for food and raw materials, and our ships covering the seas acted like the magic carpet of the "Arabian Nights" in conducting the great business of international exchange between Britain and the rest of the world.

The great Exhibition of 1851 was a revelation to the manufacturing nations of our superiority in engineering, textile machinery, and in general mechanical equipment. It was said by the "croakers" that we opened our workshops to the bandits of the world, and invited them to despoil us of our treasures. But nothing was sold that was not paid for at a substantial price. The Exhibition, however,
taught lessons to us as well as to our rivals. We were superior in heavy cloths and in the general fabrics for the million, but in the better goods, and especially in silks, we were inferior in design, taste, and colour. In the same way in the fine all-wool merinos and cashmeres, the French exhibits were marked by superior excellence of finish and quality, which to a large extent they still retain.

It was not to be expected that other nations with resources equal to our own, and with plenty of cheaper labour, would be content to leave the field of manufacturing entirely in our hands. Our machine makers were as willing to sell their wares as the machine users had been to sell theirs, and soon there opened up a vast export of machines of all kinds for the equipment of competing factories in other countries. For more than twenty years those who have followed the course of events have seen that half the workpeople in this country have been employed in forging weapons to be used by competitors in other countries against the other half. Even if we had desired to stop all this development of manufacturing in other countries I have never seen a suggestion as to how it could be done. Even if we could have prevented the sale of British machinery to our rivals, the parts would easily have been obtained and copied by foreign makers. Under Free Trade the wealth of the country so increased that we were able to supply to other countries a vast amount of
capital for the building and equipment of railways, factories, and all kinds of industrial undertakings. We became the "universal provider" of all machine-made goods and of everything pertaining to mechanical production, and by distributing our inventions and monopolies everywhere we "levelled up" the enterprising nations of the world to our standard, and in effect restored the practical equality of equipment that had existed among them one hundred and fifty years before. This is the natural result of a policy which encouraged our people to buy in the cheapest and sell in the dearest market, and although it exposed the manufacturers of Britain to the rivalry of those of other countries, it resulted in the enrichment of the whole world, and of this country most of all. It may be said that for at least thirty years our industrial rivals in other countries have possessed themselves of our material advantages, and they have been untiring in their efforts to turn them against us.

**Better Education Abroad.**

In one direction at least they have "outranged" us. While we concentrated our attention on the development of our machines they devoted their energies to the educational equipment and training of their men. They recognised what we had ignored, that of all machines the human machine best paid for development. "There is that scattereth and yet increaseth, and there is that withholdeth more than is
meet, and it tendeth to poverty." Our continental neighbours scattered their education broadcast, and it brought them their chief increase in industrial wealth; we in this country withheld it, and it has tended to our material as well as to our intellectual poverty. None can tell the loss to this country through our neglect of intellectual training. I unhesitatingly assert that in every important manufacturing industry in which we have been beaten by the foreigner the evidence on inquiry has shown that the cause has not been due to lower wages nor longer hours, nor to any advantages in obtaining raw materials—least of all to their protective tariffs—but to the superior education and technical training of our rivals. While resisting, on the ground of poverty, in this country the establishment of educational facilities equal to those of our neighbours, we have been paying for their technical schools by buying the commodities that these schools were instrumental in producing. I mention this fact because it is the only protection of our rivals that has enabled them to score against us; they have surpassed us "in putting their brains into their work." But having in many instances surpassed us in the effective use of our own machines, they then erected barriers in the shape of protective tariffs with the object of compelling their own people to support their own manufacturers as against those of this country, and I confess that the loss of important markets sustained by British manufacturers has caused in many
instances intense suffering and dislocation until other trades or new markets could be found. This periodical displacement has been going on for at least twenty-five years, but such has been the enterprise and the perseverance of many of our manufacturers, that in most instances they have overcome their difficulties, and literally as one door has closed another has opened. Commenting on the same difficulty of dealing with protective duties which our wool manufacturers had to contend with two hundred years ago even more than now, De Foe (the author of "Robinson Crusoe") remarks: "Our manufacture" (from wool) "is like a flowing tide, if it's bank't out in one place, it spreads by other channels, at the same time, into so many different parts of the world, and finds every day so many outlets, that the obstruction is not felt; but, like the land to the sea, what it loses in one place it gains in another."

**The Success of Our Policy.**

The Fair Traders and Protectionists foretold immediate ruin and disaster as the result of allowing our trade to be assailed and not hitting back, but their prophecies seem to be no nearer fulfilment now than when they were made, over twenty years ago. Employment is more regular and is better paid now than it was then, food and clothing are cheaper, and the people enjoy greater comforts and more leisure than ever before.
THE WOOLLEN INDUSTRY

We still command the best share of the neutral markets, and while in general holding the best branches of our home trade, we do the lion’s share of the import business with each of our largest protected competitors. And in spite of the pessimists at home and the critics abroad who disparage our position and foreshadow our coming decay, among our best informed rivals in every country the confession is universal that if the products of Britain were allowed a free entry they would invade every market in Europe and America even against its own manufacturers.

It would be difficult to estimate the influence of Britain in promoting the prosperity of our Colonies and other countries by her manufacturing industries and her policy of free imports. This applies to all industries, but especially to wool. The first sample of Australian wool was brought to this country as a curiosity in 1808. It was not, however, till twenty years after that the yearly import reached a million pounds weight, but following the inventions of combing machinery and the adoption of Free Trade the consumption of our own domestic wool and the import of colonial wool reached enormous proportions, the production of wool being the chief source of the enrichment of our Australian Colonies.

The annexed figures give a far better idea of the growth of the British wool industry than can be obtained from the statistics of the value of the exports of manufactures. The raising of tariffs, especially
those of the United States, have from time to time seriously affected the exports from this country. There have also been periods of inflation and depression of prices, which have abnormally affected values, so much so that for purposes of comparison the setting of one period against another is in some instances so misleading as to be worthless.

**Consumption of Wool in the United Kingdom.**

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<td>9,000,000</td>
<td>—</td>
<td>105,000,000</td>
</tr>
<tr>
<td>1850 130,000,000</td>
<td>77,000,000</td>
<td>26,000,000</td>
<td>181,000,000</td>
</tr>
<tr>
<td>1870 150,000,000</td>
<td>266,000,000</td>
<td>101,000,000</td>
<td>364,000,000</td>
</tr>
<tr>
<td>1890 138,000,000</td>
<td>649,000,000</td>
<td>371,000,000</td>
<td>502,000,000</td>
</tr>
<tr>
<td>1900 141,000,000</td>
<td>587,000,000</td>
<td>221,000,000</td>
<td>576,000,000</td>
</tr>
<tr>
<td>1902 135,000,000</td>
<td>676,000,000</td>
<td>110,000,000</td>
<td>562,000,000</td>
</tr>
</tbody>
</table>

**The Year 1872.**

For example, it is a favourite device of some of the Fair Traders to quote the statistics of the export of woollen goods in the selected year 1872, when they reached £39,000,000, against, say, 1900, when they were valued at £25,000,000, as showing the decline of the wool industry. These figures certainly indicate without explanation an alarming shrinkage. It happens, however, that 1872 was the year of the biggest boom ever known in the woollen and worsted industry. The Franco-German war was just over, and our two great manufacturing rivals and customers were well-nigh
strangled and completely disorganised. There was a tremendous demand for goods from all parts of the world, and England was the best equipped for supplying it. English wool reached the highest price ever known—half a crown a pound—about four times its value in 1900, when the lowest point was about reached. Of course manufactured goods and yarns followed the raw material, and to quote these two years as representing the normal conditions of the trade is a misrepresentation of the facts. In 1872 the consumption of wool was the largest on record up to that date, and amounted to 389,000,000 lbs. The inference would naturally be that our export of goods having so seriously diminished in 1900 our consumption of wool would have diminished in a similar proportion. Yet in 1900 we consumed 576,000,000 lbs.—half as much again as in 1872. This hardly spells ruin.

In 1872 we did an enormous export yarn trade, especially with Germany; it amounted to 41,800,000 lbs. But in 1900 this trade, instead of falling off, had risen to 72,500,000 lbs. In the interval a new industry had arisen, namely, the export of combed tops, which in 1900 reached 28,000,000 lbs. There was also a considerable increase in the home trade for manufactured goods, but I am of opinion that there has been a falling off in the weaving industry of the Bradford district, the demand for labour at better prices in other industries having taken away many weavers. The married women are more and
more required at home, and the men in the machine shops, earning higher wages, can afford to keep them there. It is the natural and gratifying outcome of our prosperity that the demand for labour in so many directions is constantly attracting our operatives from the lower paid to the more lucrative industries. For many years past there has been a great increase in the import of manufactured wool goods and yarns, which, instead of indicating decay, as is so often proclaimed by the protectionists, is an evidence of advancing well-being on the part of our people. Under perfect freedom of exchange these imports would be merely incidents in the international division of labour in which the most efficient country would make choice of the branch of industry that pays best or is most suited to its resources. Let me illustrate. I remember a great outcry many years ago that Leeds was going to ruin: it had lost the flax trade. The fact was that both labour and capital in Leeds could do better in other industries, and so the flax trade was allowed to find a home in France and Belgium, where wages were lower and the hours were less restricted by factory legislation.

Scotch Weavers and Belgian Yarn.

Bitter complaints were made twenty years ago of the downfall of the woollen spinning industry, as was shown by the immense import of woollen yarn from Belgium, and the Commissioners on
Technical Instruction at that time, in order to get at the facts, visited the factories in which it was produced, and those also in Glasgow and the south of Scotland in which the yarn was woven. We ascertained that about fifty years ago the Glasgow manufacturers were almost wholly supplied with woollen yarn from Yorkshire, but that in the course of years the industry had practically been transferred to Belgium. In fact, the Belgians started a new industry. Among the wools imported in those days to Liverpool were some from Buenos Ayres, which were much infested with "burrs," the prickly seeds of a plant that grew extensively on some of the pastures. The English spinners, who were unable to extract the burr, would have nothing to do with the wool, which became greatly neglected, and was offered at a much depreciated price. This wool, so shunned by the British, was experimented upon by the Belgians, who by chemical knowledge obtained in their technical schools hit upon a process of extracting the burr, thus making a yarn very much cheaper for the quality than any offered by the English or Scotch spinners. There was no British yarn like it, and for a time it did not find favour. But its cheapness made an opening for it, and gradually it superseded the Yorkshire yarns in the Scotch trade, and became so great an industry that the sale of the wool was transferred from Liverpool to Antwerp, where the sales have since been conducted. We were told in the woollen districts of
Yorkshire that the loss of this great trade in yarn had been made up by something better, and the woollen spinners of the south of Scotland confessed that they were not seriously hurt by it, although at that time the import had reached 14,000,000 lbs. a year, employing about fifty spinning mills, with an average of ten sets of carding engines in each. The Glasgow manufacturers affirmed that the introduction of Belgian yarn had been the salvation of the textile industry of Glasgow. They said that it would be simply impossible to spin the yarn in Scotland, there being no labour available at the low price paid in Belgium, and they further maintained that to stop the import of Belgian yarn would practically compel many of the manufacturers of Glasgow to establish weaving plants in Belgium. Yet the import of this yarn amounted in 1902 to 12,000,000 lbs., at a value of over £1,000,000, and it is quoted by the protectionists as one of the instances of the destruction of British trade.

**WHO DOES THE DUMPING?**

Then as regards the import of woven goods, it is undoubtedly true that the demand for pleasanter and more profitable work has attracted many weavers from Yorkshire factories, while at the same time British yarns have found their way more and more to German mills, where at lower wages they have been woven into most attractive goods, and dyed, finished, and in many instances shipped to England.
A short time ago a German merchant in Bradford informed me that one of his customers had sent him some patterns of goods which he was shipping to London made from Bradford yarns, of which he was a large buyer, and the merchant had seen the self-same goods displayed in the leading shop windows of Bradford. Under the scheme of retaliation suggested by Mr. Chamberlain probably the first shot would be fired at Germany, and would be aimed straight at the import of worsted goods, which are said to be "flooding our markets." As a matter of fact, however, the flooding is the other way, for protected Germany bought from us in 1902 woollen goods and yarns valued at over £4,000,000, and sold to us in the same year goods and yarns valued at less than £2,000,000. To shut out of our markets these manufactured goods from Germany would act like a boomerang in shutting out from Germany the British yarns from which the goods are made. Had we not better "bear the ills we have than fly to others that we know not of"?

This wonderful weapon of Protection not infrequently recoils on the protector. Several years ago an industry which grew to large dimensions was established in a continental country for the manufacture of "ready-made clothes," which were exported to our Colonies and to all parts of the world. The cloth was almost entirely imported from England, and the patriots and domestic wool
manufacturers prevailed on their Government to foster the home production of the cloth by putting a heavy tariff on the imported cloth from Britain. The British manufacturers lost their market for a time, but an opportunity was afforded for the establishment of the "ready-made clothes" industry in this country, which in a few years absorbed considerably more cloth than had been exported, and practically took the trade away from the country that had established it. Britain does not always come off second best in her competition with the protected foreigner. At any rate, in towns like Bradford and Keighley, that have stood the full brunt of the protective tariffs of the world, the population has more than doubled in the last thirty years, and the people never enjoyed such regular employment and so much comfort and leisure as now.

CANADIAN CORN AND AUSTRALIAN WOOL.

Undoubtedly the most serious question that has arisen in connection with our manufacturing industries since the repeal of the Corn Laws is the scheme of preferential tariffs between Britain and her Colonies which has been thrown into the arena of political discussion by the Colonial Secretary. As yet the scheme is without form and void, except that it contemplates giving a preference on the imports of colonial products to this country by placing a substantial tariff on similar products from other coun-
tries. The Colonies are to compensate the Mother Country, not by admitting her products free, as she takes theirs, but by levying a lighter duty on her manufactures than on those from foreign countries. Now on this point there ought to be no mistake. It is a matter of business, and not of Imperial Unity and brotherhood, in which business does not enter. In Canada there are distinctly two parties: there is the party now in power which is especially interested in developing the natural and agricultural resources of the Dominion, and the party now in opposition that favours the development of manufacturing industries concurrently with agriculture. The manufacturers are stoutly opposed to the reduction of duties on any pretext. Their factories were established under high protection with the deliberate intention of shutting out such British goods as they could produce at home, and they affirm that any material lowering of the duties will ruin their industries. Just in proportion as this measure benefits the manufacturers of the Mother Country it will be represented as injuring those of Canada, and instead of promoting Imperial Unity, it will make division and cause ill-feeling; and when the manufacturing interests again get the upper hand in the Canadian Parliament, which may come sooner than we think, there will be no hesitation on their part to restore to the manufacturers the protection that has been taken from them, even though their action may imperil the whole preferential scheme. Mr.
BRITISH INDUSTRIES

Chamberlain has admitted that food in this country will have to be taxed, but as yet he does not consider it is feasible to tax raw materials. Our chief import from Canada is food, which is to be protected by a tax on foreign food; while our chief import from Australia is wool, which represents a higher value than our food from Canada, and is not to be protected. Is it likely, in the financial bargain for colonial loyalty, that Australia will consent to the protection of Canadian food while her own wool is exposed to the open competition of the world? As to promoting unity, the probabilities are entirely in the other direction, and jealousies between the Colonies are sure to be aroused in proportion as one Colony appears to be more favoured than another. We may be certain that the Australian Colonies will refuse to make any reduction in their duties on manufactures that would injure their own nursed industries, and such reduction, even if obtainable, would never be accepted by our home manufacturers at the expense of any tampering with our free import of wool from the rest of the world.
THE LINEN INDUSTRY

By Sir R. Lloyd Patterson

The earlier history of the linen trade before the introduction of machinery does not enter into the scope of the present article. Flax spinning by machinery to any important extent, especially wet spinning, commenced in the north of Ireland in 1828, some little dry spinning having previously existed there, as did dry spinning in Dundee for some time, and wet spinning in Leeds for a short time, previously. The trade soon assumed important dimensions in the three kingdoms: in England principally in Yorkshire and Lancashire, but also in Cumberland, Dorsetshire, and Somersetshire; in Scotland principally in Fifeshire and Forfarshire, but also in the south-west, Glasgow, Renfrewshire, and Ayrshire; in Ireland principally in the north-east, with Belfast as a centre. By 1850 there were 326,000 spindles in the North of Ireland; and by 1853 this number had increased to 500,000 spindles (contained in 80 mills)—this only twenty-five years after the introduction of the industry to Ulster.
The 500,000 spindles of 1853 in Ireland showed a nett increase at the end of the century of about 338,500, the total being then estimated at 838,582, a moderate increase on balance for a period of forty-seven years; but some noteworthy fluctuations had occurred in the meantime.

From the interesting and valuable reports of the Flax Supply Association, I learn that the number increased from the 500,000 spindles of 1853 till 1875, when the maximum of 924,817 spindles was reached. Since then the tendency has been generally downwards, some upward movement or a standstill for a year or two being occasionally recorded, but the total nett decline during the last twenty-five to twenty-seven years is only 86,235 spindles.

The size of the mills in former times as compared with the present is worthy of remark.

Fifty years ago each separate spinner in the trade had an average of 6,250 spindles; each company or firm now controls an average of 16,442 spindles.

In Scotland in the last thirty to thirty-five years or so many concerns (I could name 20 or more) have been stopped or broken up; while a similar fate has overtaken very many in England, the once important flax-spinning industry of Yorkshire being now almost extinct. The linen-weaving industry of Yorkshire, on the other hand, now supplied principally by foreign yarns, has maintained its position fairly well.
IRELAND HOLDS HER OWN.

Owing to certain advantages, Irish spinners have hitherto had the best of it in this struggle for existence, for, with the over-production that was going on, it had become a question of the survival of the fittest. Let us compare the figures for Ireland with similar returns from the principal flax-spinning countries in continental Europe, viz.:

In Germany and Austria the maximum was reached in 1874 with 741,214 spindles. While in the last returns to which I have had access this number was reduced to 573,210, a diminution of 168,004 spindles in 27 years.

In Belgium the maximum was reached also in 1874. By 1900 this number had fallen to 287,580, a diminution of 32,420 spindles.

In France the maximum was reached earlier—in 1867. The year 1874, which was the highest in the other continental countries mentioned, already showed a considerable decline in France. This went on continuously till now (1902), when the number has fallen to 448,426 spindles, a diminution of 301,574 spindles.
We thus see that, while Ireland showed a decrease in about 25 years to 1900 of 86,000 spindles, Austria and Germany had decreased by ... ... ... 168,004 spindles. Belgium do., do., do. ... 32,420 "
And France, over a rather longer period, had decreased by ... ... ... 304,574 "
That is, a decrease in those countries of 501,998 spindles.

This is a significant commentary on what we so often hear, that continental competition is killing the Irish trade; for, while the Irish spindles have decreased about 9 per cent., those in the continental countries named have decreased in about the same time some 27½ per cent., and in France alone about 40 per cent.

Italy has now some 65,000 spindles at work; and in Russia, fostered by high tariffs, the industry has assumed important dimensions, the 83,000 spindles of thirty years ago having increased to over 300,000 now. This will be further alluded to.

Measured as near as may be by decennial periods, the number of spindles in Ireland is given in the report already mentioned as follows:—

In 1828 wet spinning of flax by machinery commenced.
" 1841 there were returned 250,000 spindles.
" 1850 " " " 326,008 "
" 1861 " " " 592,981 "
" 1871 " " " 866,482 "
" 1875 the maximum of 924,817 " was reached.
" 1881 there were returned 879,242 "
" 1891 " " " 827,451 "
" 1901 " " " 839,498 "
Of which latter number 10,700 were in a closed concern.
THE LINEN INDUSTRY

(The writer regrets his inability to give similar figures for England and Scotland.)

During the decade between 1850 and 1860 there were some disturbing causes. The outbreak of the Russian war had at first an adverse effect on the trade, owing to the interruption in the supplies of Russian flax; but by 1860 trade had resumed its normal conditions. The increase in spindles during the period was large. The American war broke out in 1861. Its effects at first were gravely adverse, the United States being our large customers; but when cotton ran up in price from about 6d. to about 2s. 6d. per lb., linen became the only substitute for the almost unobtainable cotton goods; and this gave the linen industry such a stimulus that from 1861 to 1868 the number of spindles in Ireland had rapidly risen from 592,981 to 894,273, an increase in seven years of 301,292 spindles, or rather over 50 per cent. The outbreak of the Franco-German war in 1870 temporarily upset the trade after its condition had again become normal; but this did not last long, and the restoration of peace ushered in a period of great prosperity, till in 1875, as already mentioned, the maximum number of spindles was reached. From 1880 till 1890 business was steady and on the whole fair to good; but soon after the latter year a period of depression set in which, with some few brief intervals of prosperity, has lasted almost ever since.
The Flax Crop.

It is a well-known axiom in manufacturing that to the continued, steady prosperity of any industry an adequate and constant supply of the raw material consumed in it is a matter of primary importance. Owing to the general suitability of the soil and climate of Ireland for the growth of flax, and the large consumption of the fibre in the country, one might suppose that home requirements would, for the most part, be met by home produce; but such, unfortunately, is no longer the case—all the coarser and also all the finer material required being imported, the former from Russia and the latter from Belgium—Ireland supplying latterly only a small portion of her own requirements in the medium qualities.

The extent of land under the flax crop in Ireland has varied greatly within the last fifty years. In 1860, the year before the outbreak of the American war, the sowing amounted to 128,595 statute acres. This figure showed a large annual increase till 1864, when the maximum of 301,693 acres was reached. It has been estimated that that acreage yielded 34.43 stones per acre, or a total of 64,506 tons, which, at the average price of £58 4s. 3d. per ton, should have produced a sum of £3,754,250. Discouraged by that (then) comparatively low price, £8 per ton less than the year before, the following year (1865) showed a decrease in the sowing of 50,260 acres, which, coupled with a diminished yield of only 25.14 stones per acre (a total crop of 39,561 tons),
and a continued brisk demand, raised the average price of Irish flax to £81 9s. per ton, an advance in one year of over £23 per ton, or fully 40 per cent., which, with one exception (1868), when the maximum average of £82 12s. was reached, is the highest on record. The year 1869 saw a return to normal conditions with an average price of £58 11s. 10d., a fall of £24 per ton. Thenceforward it will suffice to mention the Irish flax sowing in decennial periods, till we come to the last seven years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Acres</th>
<th>Yield per Acre</th>
<th>Total Yields</th>
<th>Average Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870</td>
<td>194,803</td>
<td>2571</td>
<td>30,771</td>
<td>£54 17 6</td>
</tr>
<tr>
<td>1880</td>
<td>157,534</td>
<td>2480</td>
<td>24,508</td>
<td>£55 17 4</td>
</tr>
<tr>
<td>1890</td>
<td>90,871</td>
<td>3310</td>
<td>20,045</td>
<td>£50 14 1</td>
</tr>
<tr>
<td>1895</td>
<td>95,202</td>
<td>2180</td>
<td>12,972</td>
<td>£43 16 8</td>
</tr>
<tr>
<td>1896</td>
<td>72,253</td>
<td>2402</td>
<td>10,844</td>
<td>£39 16 10</td>
</tr>
<tr>
<td>1897</td>
<td>45,576</td>
<td>2393</td>
<td>6,818</td>
<td>£42 13 9</td>
</tr>
<tr>
<td>1898</td>
<td>34,489</td>
<td>2914</td>
<td>6,281</td>
<td>£40 11 9</td>
</tr>
<tr>
<td>1899</td>
<td>34,489</td>
<td>3083</td>
<td>6,743</td>
<td>£52 4 8</td>
</tr>
<tr>
<td>1900</td>
<td>47,451</td>
<td>3190</td>
<td>9,470</td>
<td>£60 2 9</td>
</tr>
<tr>
<td>1901</td>
<td>55,442</td>
<td>3693</td>
<td>12,977</td>
<td>£52 6 0</td>
</tr>
<tr>
<td>1902</td>
<td>49,740</td>
<td>--</td>
<td>--</td>
<td>£56 18 3</td>
</tr>
<tr>
<td>Maximum 1864</td>
<td>301,693</td>
<td>3443</td>
<td>64,506</td>
<td>£58 4 3</td>
</tr>
</tbody>
</table>

In the present year (1903) the sowing amounts to 44,667 acres.

These figures, and those immediately preceding, are very interesting and very instructive. They show that the lowest average price on record was touched in 1896; and the result is immediately reflected in a decrease of 26,677 acres in the sowing
of the next year (1897), when, most unfortunately, the evil of a poor yield was superadded to that of a wretched price. No wonder the long-suffering Irish farmer was discouraged. And we find, in the two following years, the smallest sowings on record, both under 35,000 acres, with yields in both cases of under 7,000 tons.

Over the last forty-three years the average price paid by myself and my successors in business for nearly 26,000 tons of Irish flax of a great variety of qualities was nearly £58 per ton. The highest price I ever paid, and that only once, was £128 per ton.

These compare with a maximum of £82 12s. in 1868, and a minimum of £39 16s. 10d. in 1896, a difference between the maximum and minimum averages of nearly £43 per ton.

Every one would welcome increased sowings of flax in Ireland, but for various reasons, among them the increasing scarcity of labour in the country, there is no hope of the figures of former sowings being ever seen again. Following the fall of £8 per ton in 1901 the sowing of 1902 showed a decrease of nearly 6,000 acres; and 1903 shows a further decrease of 5,000 acres. Some Irish flax is exported every year, as there are some purposes for which it is the most suitable fibre in the world; and in the big sowings in the sixties and seventies the quantity exported to England, Scotland, France, and America was large.

The quantity of home-grown material left after
THE LINEN INDUSTRY

Deducting the now small exports must be supplemented each year by importing foreign supplies to make up the total quantity required for consumption. The imports of flax material into Ireland for the last ten years average above 30,000 tons per annum. Under better agricultural conditions a large part of this imported flax might be replaced by flax grown in Ireland.

The imports of flax, &c., into the United Kingdom for the year 1902 are returned as follow:

<table>
<thead>
<tr>
<th>Flax</th>
<th>Tow and Codilla</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons ... 58,159</td>
<td>15,452</td>
</tr>
<tr>
<td>Value £2,592,912</td>
<td>£351,478</td>
</tr>
</tbody>
</table>

Of the above imports of flax, 38,121 tons, value for £1,414,581, came from Russia; 15,502 tons, value for £987,277, from Belgium; 3,241 tons, value for £152,210, from Holland; and the small remainder from other countries not specified. The average value of the above flax imports from Russia is thus about £37 per ton, while those from Belgium average about £64 per ton.

THE EFFECTS OF THE AMERICAN WAR.

The American war has already been mentioned, but must be further alluded to as having had an influence on the whole subsequent history of the linen trade that no one could then have anticipated. During the inflation of linen, caused by the extreme scarcity and consequent famine prices of cotton,
some rapid fortunes were made; and there was a strong desire on the part of many to participate in so lucrative a business. That period, therefore, witnessed large extensions to many existing concerns and the erection and equipment of some new ones, some of the smaller of which had but a brief existence. But it also witnessed a willingness on the part of many proprietors to sell their concerns, the buyers being in most cases limited liability companies formed for the purpose. Comparatively few of the concerns that thus changed hands at that time have proved satisfactory investments for their shareholders; and in the majority of cases—with some few notable exceptions—many of them have become, and seem likely to continue, non-dividend paying. Some have gone into liquidation, while others have been reconstructed or have readjusted their capital accounts. The continued existence of some of these concerns, which would have been impossible were it not for the tenacity of life imparted to them by the elastically of credit attaching to the limited liability system, is detrimental to their better-off competitors, the impecunious producers breaking prices, which others are virtually obliged to follow, and the trade is thus deprived of a fair return on the capital invested in it. In fact, credits are too lax for the permanent good of the trade.

It was feared that the increase in machinery which took place during the period of inflation, might leave the industry saddled with an over-production
when the textile trade of the world should have resumed normal conditions; but, on the other hand, it was argued that the linen trade had got a tremendous "fillip," part of the effects of which it was hoped would be permanent; besides which it was not unreasonable to assume that the ordinary growth in the use of an article like linen, which, in its various fabrics, had for ages been regarded as one of the first necessity for domestic purposes, personal wear and table use, would soon overtake any surplus production.

**LESS DEMAND FOR LINEN.**

Such expectations, however, were doomed to disappointment; and for various reasons, some plain enough, others obscure, the linen trade of the world has not been expansive of recent years—indeed, decidedly the reverse; but in Ireland the trade, as compared with other countries, is more than holding its own. Quite recently, the spring and summer of 1903, witnessed many welcome signs of general revival, stimulated no doubt in part by the production of attractive novelties in fabric and colour.

The great competitors of linen are cotton and wool, especially cotton. Wool only competes as clothing; the lighter fabrics that are now produced in it commend themselves to many on account of the saving of expense and trouble in frequent washings. Cotton is a much more serious
competitor. Its cheapness, its superficial resemblance to linen which the superior finish now imparted to it has increased, and the much greater variety, especially in colour, in which it has hitherto been produced, are all so much to its advantage that, while we regret, we need not be surprised at, the larger share of public favour which it receives.

Changes of fashion are partly responsible for the diminished consumption of some kinds of linen fabrics. In my younger days no one calling himself a gentleman wore (in the North of Ireland at least) anything but linen shirts: now but few do so. Then linen ducks and drills were frequently worn as summer trouserings: one never sees them now. Then no ladies used anything but (linen) cambric handkerchiefs; while now cotton handkerchiefs, plain and printed, are sold in enormous quantities, both at home and abroad. Some important firms in Belfast, who were formerly doing business in linen and cambric handkerchiefs only, have turned their attention in part, or in some cases even entirely, to cotton. The diminution, almost cessation, of the use of linen scarfs and hat bands atfunerals must account for a considerable total.

It has often struck me as strange the large profits that retail drapers charge on linens of all descriptions, as compared with cottons. Such a practice must have a deterrent effect on the general use of linens; but there is no moral turpitude in it such as there was in those frauds, so properly exposed in the
prosecutions brought by the Linen Merchants' Association against certain people for selling union, and even all cotton goods, as "pure linen." I am afraid, from the disclosures then made, that such frauds are only too common. The public are cheated, and the trade suffers from the disappointment caused by the unserviceable character of the so-called linen.

NEW OUTLETS.

The Association within he last few months very properly inaugurated a vigorous fresh campaign against such frauds, and many prosecutions, followed by convictions, have resulted.

To protect the public from fraud it has been suggested that there should be some mark of identification on linen as there is now on plate, and I do not see why there should not be such. A fine damask table-cloth, for instance, is much more valuable than a few silver spoons.

One sometimes hears the complaint from old housekeepers that linen is not so durable as it used to be. That may be so, but only to a limited extent; goods must now be bleached farther to meet the inexorable public demand for pure white linen; but the real ground of the complaint is to be found in the abuse which linen now receives at most modern laundries, and the too free use of chemicals in these establishments.

One new outlet for linen yarn which promises well
has lately been found through the ingenuity of a gentleman resident in Denmark. He was a sufferer from rheumatism, and his physician advised him to substitute linen for the woollen underwear he had previously used; so he commenced and finally worked out the problem of adapting something in the nature of a knitting machine to the peculiarities of linen yarn, and the result is the production of a new and extremely comfortable material for underwear (I speak from personal experience), which is already favourably reported on by the medical journals and by many leading medical men in England and elsewhere. This new material is known in the trade as Kneipp linen mesh underwear.

Several firms are now producing some very attractive novelties in fancy fabrics; and the richness and variety in make and colour seen in the dresses and decorations at the "all linen ball" at Belfast lately were a revelation to many even in the trade.

New and beautiful designs in damasks charm and delight the eye; our damask manufacturers are fully alive to the importance of continually putting some new design before the public, while a leading damask manufacturer lately told me that some quite old designs are again coming into vogue, like Chippen-dale or other old furniture. The damask department of the trade thus keeps flourishing.

CONTINENTAL COMPETITION.

Prior to and about 1836, Irish yarns and linens
THE LINEN INDUSTRY

were being sold in considerable quantities to France. The business was of sufficient volume to encourage a shipping agent to despatch a vessel direct to a French port, and in December, 1836, the first cargo of Belfast yarns and linens sailed for Dunkirk. The project was successful, and it was so followed up that in 1839 a steamer commenced plying once a fortnight from Belfast to Havre, carrying yarns and linens, while there were also occasional sailings to Antwerp, Dunkirk, and Nantes.

It will thus be seen that the various linen manufacturing countries in continental Europe had been large buyers of Irish yarn, and some of them good customers for linens also. The enterprise of the linen magnates at Lille, Ghent and Bielefeld, and in Silesia and Bohemia, did not lag long behind that of our own spinners, and mills sprang up in many places. While business was very brisk, these mills only partly supplied the home demand, and recourse continued to be had to the United Kingdom for considerable quantities of certain kinds of yarn which we were able to produce better and cheaper than the Continent.

As the continental consumption of linens diminished, the production of yarns in the mills there became able to meet not only local requirements in the kinds produced, but also to leave a surplus of such over for export. These consisted for some time chiefly of the medium and lower counts of linen yarns, which their closer proximity to the Russian
flax markets, the longer hours of labour, and the lower wages prevailing there enabled them to sell at prices with which the British spinner could not compete. English spinners felt the pinch first, with the result we have seen of the almost total extinction of the industry there. Certain Scotch spinners felt it next—especially those who were engaged in wet spinning. In Ireland it was less severely felt, as the figures already mentioned as to the comparatively small decline in our spindles abundantly prove. The results are very curious; and the figures disclose a most remarkable change in the balance of the trade; in fact, a complete turning of the tables.

In 1861, the year the American war broke out, the exports of linen yarn from the United Kingdom were returned at 12,045 tons, of a declared value of £1,622,216.

In 1864, when the war was at its height, these figures had risen to their maximum of 17,936 tons, value for £2,991,969, showing an increase in the three years of 5,891 tons, nearly 50 per cent. in quantity; and of £1,369,753, or about 84 per cent. in value. By 1901 the exports had fallen to 5,791 tons, value for £824,900, a decline from the 1864 maximum of 12,145 tons in quantity and £2,167,069 in value. The year 1902 shows a small increase of exports of linen yarn, viz., 6,346 tons, of a declared value of £842,200.

The average value per ton of the exports of linen yarn for the three years mentioned is as follows:—
1861, £133; 1864, £167; 1901, £142 10s. This is an interesting comparison, and it proves that it is now the better qualities and finer counts of Irish yarn that are exported; as, notwithstanding the extremely low prices lately current, the average value of the 1901 exports is £9 10s. per ton higher than that of 1861, when prices were considerably higher.

**A BOON TO THE WEAVERS.**

The competition of imported yarns is more felt now in Scotland than in Ireland, its effect in England having had a good deal to do with the virtual extinction of the spinning industry in the latter country. The recent large increase of flax spinning in Russia has been mentioned. Protected by high—now quite prohibitive—tariffs, Russian spinners defy all outside competition within the country. Some French and Belgian spinners, to evade the duty, erected mills in Russia in excess, as is now apparent, of the country's requirements, and Russian mills are now sending considerable quantities of yarn into these countries.

Although it may be against Irish spinners, and undoubtedly presses still more severely on those in Scotland, one must admit that the importation of these continental yarns has been of material service to other departments of the trade, weaving, bleaching, and finishing; for, without those supplies of moderate-priced yarns of kinds that our home spinners could not produce so cheaply, one cannot
see how certain hard-pressed sections of the manufacturing industry could have survived; and, had they gone, the advantage to labour, to the after processes, and to the trade at large, would have been lost too. While sympathising, therefore, with the Scotch spinners, we feel that, so far as Ireland is concerned, her manufacturing, bleaching, and finishing departments benefit by these cheap foreign yarns.

It is only natural to expect that yarn prices would show extreme fluctuations when the industry was exposed to such disturbing influences. I shall briefly illustrate this by quoting the prices (per bundle of 60,000 yards) of one standard number each of line and tow yarn at the dates mentioned, viz. —

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>80's line</th>
<th>25's low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>s.   d.</td>
<td>s.   d.</td>
</tr>
<tr>
<td>December, 1860</td>
<td>before the American war.</td>
<td>4     3</td>
<td>6     3</td>
</tr>
<tr>
<td>August, 1864</td>
<td>height of</td>
<td>6     7 1/2</td>
<td>10    4 1/2</td>
</tr>
<tr>
<td>December, 1865</td>
<td>after its close.</td>
<td>6     1 1/2</td>
<td>8     0</td>
</tr>
<tr>
<td>&quot; 1868</td>
<td></td>
<td>5     3</td>
<td>6     10 1/2</td>
</tr>
<tr>
<td>September, 1870</td>
<td>Franco-Prussian war.</td>
<td>3     4 1/2</td>
<td>5     9</td>
</tr>
<tr>
<td>December, 1870</td>
<td>war over.</td>
<td>3     6</td>
<td>5     9</td>
</tr>
<tr>
<td>&quot; 1871</td>
<td></td>
<td>5     1 1/2</td>
<td>6     9</td>
</tr>
<tr>
<td>&quot; 1875</td>
<td></td>
<td>4     6</td>
<td>6     9</td>
</tr>
<tr>
<td>&quot; 1880</td>
<td></td>
<td>4     0</td>
<td>5     6</td>
</tr>
<tr>
<td>&quot; 1885</td>
<td></td>
<td>3     4 1/2</td>
<td>5     1 1/2</td>
</tr>
<tr>
<td>&quot; 1890</td>
<td></td>
<td>3     7 1/2</td>
<td>4     5 1/2</td>
</tr>
<tr>
<td>&quot; 1894</td>
<td></td>
<td>2     10 1/2</td>
<td>4     4 1/2</td>
</tr>
<tr>
<td>&quot; 1895</td>
<td>a period of great depression</td>
<td>3     0</td>
<td>4     9</td>
</tr>
<tr>
<td>&quot; 1897</td>
<td></td>
<td>2     10 1/2</td>
<td>4     3</td>
</tr>
<tr>
<td>&quot; 1900</td>
<td></td>
<td>4     0</td>
<td>5     3</td>
</tr>
<tr>
<td>Maximum, August, 1864</td>
<td></td>
<td>6     7 1/2</td>
<td>10    4 1/2</td>
</tr>
<tr>
<td>Minimum, 1864 and 1897</td>
<td></td>
<td>2     10 1/2</td>
<td>4     3</td>
</tr>
<tr>
<td>Extreme fall from maximum to minimum</td>
<td></td>
<td>3     9</td>
<td>6     1 1/2</td>
</tr>
</tbody>
</table>

or 57 per cent. and 59 per cent.
THE LINEN INDUSTRY

The figures given show the extremes of the inflation of the American war time and the depression of some of the years in the last decade—1890 to 1900—when it is not too much to say that the trade came through a most severe crisis, resulting in disaster to some; but from which the industry on the whole emerged fairly well.

The manufacture of linen threads has long been an important branch of the flax industry, giving employment to a large number of operatives in several extensive concerns in the three kingdoms.

The export branch of the thread business, however, is by no means what it was. High tariffs in the United States put an end to that, the result being that the principal makers of linen thread have established their own thread works in the States, importing their flax hackled, that is dressed, ready for use from the parent works in this country. If some method could be discovered to make linen thread more elastic without impairing its unrivalled strength, it would be invaluable to the trade.

PROGRESS OF THE WEAVING BRANCH.

Let us now look at the next process in the linen industry—weaving. Within living memory that was all done by manual labour. The power loom had long since come to be of general application in the cotton and woollen trades, and many and earnest were the efforts to apply it to linen; but serious
difficulties were encountered, and had to be overcome before the weaving of linen yarn by power became a practical and commercial success. The want of elasticity of flax yarn, notwithstanding its greater strength as compared with cotton, had long barred the way of the power-loom, which had not the consideration, so to speak, the give and take of the hand-loom weaver, for the rigidity of the linen warps. Improved mechanical arrangements in the looms, and the application of a newly-discovered superior dressing for the warps, which had the effect of making them softer and more elastic without impairing their strength, finally prevailed, and the power-loom came to stay, as a permanent and most important factor in the Irish linen industry, some time in the early fifties. The report already quoted from states that in 1850 there were 88 linen power-loomo in Ireland. At the end of 1899 there were 32,245.

The first return in the report after 1850 is for the year 1856, and the number of looms is given at that time as 1,871. Since that period the progress has been steadily and quite uninterruptedly upwards.

In three years, by 1859, the number of power-looms had about doubled to 3,633. After the end of the American war the number of looms, which, before its outbreak, had stood at 4,933, had increased in 1866 to 10,804. The increases since have been rapid and constant till the last year.
THE LINEN INDUSTRY

In 1871 the number is returned at 14,834
" 1881 " " " 21,779
" 1890 " " " 26,592
" 1900 " " " 32,245
" 1902 " " " 30,927

Of these looms a considerable, but unascertained, number are employed on union goods.

The quantities and values of the linen exports from the United Kingdom can be found by those wanting such information more in detail in the returns of the Board of Trade. For our present purpose it may suffice if I quote the total declared values of the exports of linen manufactures of all kinds, including threads, for the following years:—

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Value (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850</td>
<td></td>
<td>3,947,682</td>
</tr>
<tr>
<td>1860</td>
<td>The year before the American war</td>
<td>4,804,803</td>
</tr>
<tr>
<td>1861</td>
<td>The year it broke out</td>
<td>3,852,341</td>
</tr>
<tr>
<td><em>1865</em></td>
<td>When it was at its height</td>
<td>9,156,990</td>
</tr>
<tr>
<td>1870</td>
<td>A normal state of affairs</td>
<td>7,248,345</td>
</tr>
<tr>
<td>1880</td>
<td></td>
<td>5,836,019</td>
</tr>
<tr>
<td>1890</td>
<td></td>
<td>5,710,168</td>
</tr>
<tr>
<td>1900</td>
<td></td>
<td>5,224,594</td>
</tr>
<tr>
<td>1901</td>
<td></td>
<td>5,020,499</td>
</tr>
<tr>
<td>1902</td>
<td></td>
<td>5,427,969</td>
</tr>
</tbody>
</table>

The last thirty years thus show a gradual decline, except in 1902. The above figures include British as well as Irish manufactures; but they do not show the value of the goods consumed in the United Kingdom, which would reach a very considerable total. I must also point out that the figures just quoted deal with values only; if quantities were also considered, the decline in the volume of trade
would not be nearly as great, as values considered alone, would indicate, prices being now on a low level.

**Reduced Demand for Sails.**

From the foregoing it will have been observed that the coarse end of the trade has suffered more from foreign competition than the finer; but another cause, entirely apart from the foreign bogy, has militated severely against one former important branch of the trade, especially in Scotland: we mean the gradual displacing of sailing ships by steamers, and the consequent diminution in the consumption of sail canvas, the manufacture of which was a very important branch of the flax industry in Scotland, especially in Forfarshire, but in other places also; in the south-west of England, especially Somersetshire; in the Isle of Man, and to a small extent in Ireland.

In reply to an inquiry, I am obligingly informed by Mr. James A. M. Heyn that:

<table>
<thead>
<tr>
<th></th>
<th>Sailing Vessels</th>
<th>Steamers</th>
</tr>
</thead>
<tbody>
<tr>
<td>In 1852</td>
<td>10,241</td>
<td>156</td>
</tr>
<tr>
<td>While in 1902</td>
<td>2,689</td>
<td>8,352</td>
</tr>
<tr>
<td>Showing a falling off of</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

These fifty years, therefore, have witnessed the utter disappearance of three-fourths of the sailing vessels, which prior to that carried on most of the oversea and coasting trade of the country. The change in the Royal Navy is even greater in pro-
portion. Fifty years ago steam was only beginning to be introduced—and that, too, only as an auxiliary—to full-rigged ships into the Navy. Some of us are old enough to remember the splendid fleet of first-class line of battleships and frigates sent out under the command of Sir Charles Napier to the Baltic in 1854. Although most of these, but not all, were provided with some moderate steam power, to be used in emergencies, all were full-rigged ships. Now there are practically no sailing vessels, except for training purposes, in the Navy. No wonder canvas-makers, except those with special trades, have fallen on evil times; but still the ships that remain, the large fleet of yachts, and the requirements of tent-makers still account for a considerable total yearly consumption of canvas, into the manufacture of which a large quantity of Irish hand-scutched flax used formerly to go.

THE BLEACHING INDUSTRY.

Bleaching has always been an important part of the linen industry, and owing to the admitted superiority of the Irish bleach, a considerable quantity of linen is sent from Belgium, France, and Germany to be bleached here and returned to those countries for sale. This excellence is doubtless due to our humid, temperate climate. Owing to the nature of the business bleach-greens were first established, and must perforce remain, in country districts.
The sending of linen goods from France and Belgium to be bleached in Ireland is very curious when one considers that—

1. Ireland imports flax from those countries.
2. That flax is spun in Ireland into yarn, some of which is sold back to France and Belgium.
3. There it is woven into linen, some of which is sent back to Ireland to be bleached and finished; and then—
4. It goes back to the countries whence it came for sale.

Some of the flax, therefore, in one form or another, makes no less than four journeys, and some of the yarn three journeys, before the finished goods find a place in the merchant’s warehouse.

The hours of labour in factories in the United Kingdom are limited by statute to 55½ per week; whilst in France, Belgium, Germany, and Austria the hours, as I am informed, are 66 per week. I understand France intends to come down, in two steps of three hours each in 1903 and 1904, to 60 hours per week.

As the cost of flax-spinning plant is extremely heavy, any reduction of the output is a serious factor in increasing the cost of production.

Another difficulty with which the trade has been confronted is the serious rise in foreign tariffs on yarns and linens which has taken place since 1870. The Customs Duties of the United States of America, of France, and of Germany, the three most impor-
tant customers for Irish yarns and linens, have been increased by about 50 per cent.; while Russia has imposed duties so high as to be prohibitive to the lower and medium grades which come into competition with similar articles manufactured in that country.

Prior to the Spanish-American war, which resulted in the loss of Cuba to Spain, the Cuban tariff discriminated very severely between goods produced in Spain for the Cuban market and those going to Cuba from other countries, the result being that, even before the war, Havana, a most important market, was almost closed against Irish linens, the trade, or part of it at least, going to Barcelona and Saragossa. The result was most beneficial to the manufacturers in those cities, who, protected against all foreign competition in their own colony, reaped a rapid and abundant golden harvest. To supply the increased demand thus artificially created the manufacturers in Spain had recourse to other countries for the yarns they required, of which Ireland supplied a fair quantity, so that a portion of the trade with Cuba direct that was lost to the Irish linen merchant and manufacturer came back, indirectly, to the Irish spinner.

There can be no doubt but that the great enhancement of cost to the consumer caused by the high duties militates against the natural growth in the consumption of linen in the United States, where there is no home production of linen goods.
The duties charged in France, Belgium, Germany, and Austria enabled those countries to establish and maintain flax-spinning mills in a way that they could not have done had the industry not been protected there in its infancy. The markets of those countries are therefore now to a large extent closed against us; but we are still able to meet them when we meet on equal terms on neutral ground, unless in some special articles, such as the yarns mentioned earlier, where natural and other causes, such as locality and hours of labour, come to their assistance.
THE SILK TRADE

By Matthew Blair

(Chairman of the Incorporated Weaving, Dyeing, and Printing College of Glasgow)

Previous to the Cobden Treaty, which was negotiated in 1860, the silk trade was protected from foreign competition by a duty of 15 per cent. The consumer of course paid this enhanced price, for unless the home manufacturer can get a higher price under Protection than under Free Trade, he has no motive to desire Protection.

Aided by this bonus the silk trade, which then was mainly a hand-loom industry, increased greatly. Capital was attracted to it, and, for a time, it was very lucrative for the manufacturers. The workpeople, however, did not share in this abnormal profit. They had no protection for their labour, and had to accept the wages of competition. Periods of depression were frequent, and relief works had often to be started to keep the weavers from starva-
tion. We have no experience of such things now. Whatever advantage the period of Protection may have been to the masters, it was too often a time of suffering for the work-people.

This high Protection had an evil effect upon the manufacturers themselves, and sadly unfitted them for withstanding the coming storm.

The Cobden Treaty in 1860 removed this Protective duty, and left the silk trade to fight its battle in the open field.

The result was quickly disastrous to a large number of firms. Spoiled by the previous high Protection, they were not in a position to compete. Many mills were closed, and in some districts silk weaving entirely disappeared. The diminution of silk throwing and weaving in Congleton and other towns, which is undoubted, is being now pressed upon public notice as a reason for going back to some form of Protection.

A history like this naturally gave rise to the idea that the silk trade could not exist in this country unless under Protection. As this involved some other industry paying for support of the silk trade, it was a lamentable confession, and even a condemnation of all who were engaged in such a business, but it was not at all an unnatural idea for a manufacturer to hold, and it is still widely entertained.

Protection had brought the silk trade to this pass, that it could not be carried on to the same extent as in the past, unless one of two conditions were ful-
filled—either the consumer must by monopoly be compelled to pay whatever price might be required to keep the silk trade highly profitable, not only for those already engaged in it, but for all new-comers who might be attracted to the business by the abnormal profits.

Or, alternatively, a supply of workers must be got who would accept wages as low as were current in more backward countries, such as Italy.

The first condition would have involved, immediately, the sacrifice of the French treaty of 1860, and would ultimately have involved a system of bounties to British silk manufacturers, for by no other means is it possible to maintain a high level of profits when internal as well as external competition is active.

The second condition—the low-priced labour—was impossible, because the Free Trade policy had created a great demand for labour in other industries, and had consequently sent up the price far above the level in the protected countries of the Continent.

This was the exact economic position, and the only way out of it was by improved machinery and advanced industrial methods.

**HYPNOTISED BY PROTECTION.**

That course was not taken. Many of the rich throwsters and manufacturers retired from the business. Others had not the necessary courage or
capital to meet the competition. They lamented, and still go on lamenting, the diminution of the hand-loom weaving. They stuck to methods where hand labour was a large part of the cost of production, while progress lay in the direction of labour-saving appliances. This is the way that America succeeds, even with dear labour. As little as possible of it is employed. The absence of inventions and improvements in the thrown silk trade, compared with other industries, is a significant feature.

In arranging a National Fiscal Policy, statesmen have to look at the interests of the whole community, and not at a limited section of it. A business may be such that it could not be conducted in this country, unless highly protected; wine growing, for example. But it would be inequitable for a Government to compel a certain number, of its subjects (who pay taxes to be protected from injustice) to give an exorbitant price for a special commodity, merely to keep a certain number of men engaged in the production of that article, and it would be all the more so if it were an article of luxury. So long as the manufacturers were thus protected, they would never rouse themselves to find if, by improved methods, they could do without being supported by this drain on the pockets of the consumers.

In the same manner, the assertion frequently made, that the Cobden Treaty was the sole cause of the destruction of so large a part of the thrown silk trade, overlooks altogether the other, and very
potent, causes which were operating at that time. We will endeavour to show that the thrown silk trade did not read quickly enough the signs of the times, else much of the dislocation might have been avoided. Too often "the forgotten factor" proves to be the most important, and in this case there were many factors whose influence has not been sufficiently considered.

RUINED THROWSTERS: PROSPEROUS SPINNERS.

But, first of all, it must be remarked that the silk trade which did suffer, was the thrown silk branch.¹ No doubt at that time it was the most important, but it was not the whole silk trade of the country, and it is quite erroneous to talk of the silk trade of the country being ruined, when there is a large part of it which has never suffered in the least. We must look at the whole trade, and the subsidiary occupations which it affects, and all the workers engaged in it, and in this view, it will probably be found, that there are more people employed, more wages paid, and more money made in the silken trade of the country now than at any previous period.

For example, spun silk, which is now a large, and has always been a profitable industry, was in 1860

¹ Thrown silk is produced from the long strands that are drawn off direct from the cocoon. Spun silk is produced from the short, tangled strands that have to be straightened before they can be used.
only in its infancy. The Lister comb had not yet entirely revolutionised that business. The manufacture of silk for sewing, embroidery, trimmings, furniture and decorative purposes, was a considerable business. This secondary employment for silk was previously limited by the high prices of Protection, and had a considerable extension, as soon as a free market was declared. Fabrics of mixed silk and wool or cotton, have also been a large trade. Yorkshire and Scotland have taken up this branch, which Cheshire appears to have lost.

Then there is the large and necessary element of the distributors. It is the fashion to rail at the merchant, as a vampire that sucks the blood of the trade, and who is quite unfitted to take an impartial view of the case. Ideas of that sort may be disregarded. The machinery of distribution is just as necessary as the machinery of production. Commerce does not allow of the existence of any useless people. When they are not wanted, they make no money, and thus get a broad hint to clear out of the way. As long as they do exist they are part of the trade. Anything that increases their operations is an increase of the trade in which they are engaged. The merchants are merely the salesmen and buyers of the producers and consumers.

Viewed as a whole, the silk trade of the country has not decreased, but is larger to-day than ever it was, and we may say also that it is more lucrative. Its very existence and extension prove this. If the
trade were not very profitable, the foreigners would not be so eager to possess it.

**Killed by Kindness.**

Reference has already been made to the demoralising influence of the high Protection that preceded the treaty of 1860. On this subject we quote a remarkable passage from a paper on the silk trade, written in 1887 by the late Mr. Thomas Dickins, of Middleton, who was well informed on this subject:—

"Many of us well remember the good old days, so-called, when our manufacturers were being enriched by the killing kindness of Protection. It was natural to remain contented with such an easy and pleasant way of gaining wealth. Warp and weft had simply to be thrown together, and—the product always realising a large profit—there was no apparent reason for disturbing the crude system which existed. The dark clouds, even then looming in the distance, were not perceived through the misleading brightness which surrounded the British silk manufacturer."

This is a significant statement. The manufacturers were spoiled by success, and had dropped into crude methods. Many of them were rich, even too rich. The Rothschilds were throwsters in those days. It was a common opinion that a business was not worth having, unless it allowed the throwster to go a-hunting three days a week in the season.
The present writer knew one of these fortunate gentlemen. Needless to say that he is not now a throwster. He retired in time, became a county magnate, and goes a-hunting on the profits made by his ancestors out of the past Protection.

It was not always want of money that prevented the silk trade contending with the new conditions. Neither was it ignorance, nor lack of ability. Very often it was too high notions of the profits that the trade should return. All this was begotten of the previous high Protection.

The change from a system of Protection to Free Trade is undoubtedly a step, which, for a time, produces great dislocation, and even suffering, to some classes. Any industry that has been bolstered up by a high Protective tariff stands in a peculiarly risky position. The spur of competition is a-wanting, and indifference to improvement and economy is the natural result. But trade is too keenly cut now for the old easy-going style to prosper. Machinery has created new conditions. Business cannot now be profitably conducted unless equipment is up to the latest inventions, managed on a large scale, and with the highest technical skill. Even then an abnormally high rate of profit cannot be expected.

**Small Unprogressive Firms.**

The silk firms in existence in 1860 were numerous, and many of them not large. On the average they were little prepared for the storm. The
THE SILK TRADE

weaker ones were quickly weeded out. The larger ones curtailed their production, and as the trade was not taking off the silk, many of the wealthy throwsters retired from the business.

But those manufacturers who were in a large way, with capital and modern ideas, although hard hit by the Cobden Treaty, were not destroyed, and many of them are still to the front. The trade, if not so large as formerly, is founded on a far more secure economic basis. The manufacturers also have the honourable satisfaction of knowing that they are not subsisting on a precarious "rate in aid," levied by force of law, from their friends and neighbours the consumers.

Another important matter that was overlooked by the thrown silk trade in 1860, was the complete change in the character and wants of the buyers, which arose as a consequence of the transfer of production of textiles from hand labour to that of steam power.

Machinery is employed solely because it produces more goods at less cost per article than can be done by hand. But machinery must be kept running, and a market must be found for the product. This extended market must of necessity be a less wealthy one. Hence it is always the case that machine-made goods must be of a cheap class. Cheap goods are not durable, but the new class of customers who came upon the market did not expect or desire them to be so. To be new, fashionable, and cheap, are
the recommendations to this class of buyers—a race clearly produced by the vast extension of business, and the increase of wages among the industrial classes, which has been a consequence of our adoption of a Free Trade policy.

The silk manufacturer of 1860 hardly recognised this fact. Silk had been a costly article. A dress descended from generation to generation, and consequently had to be of durable material. The silk trade seemed for a long time to be under the belief that this was the only kind of silk goods that should be made. The foreigner did not make this mistake. He found buyers in our market who cared nothing for the silks as "worn by our grandmothers." These buyers would not have such goods. They entertained wholly different ideas. Possibly they had more money than taste or thrift. They wanted dress stuffs to be cheap and fashionable, and to be frequently changed. The foreign manufacturer wisely judged that his business was to supply what the public wanted. The home manufacturers did not bestir themselves to produce goods for this class of people, and the merchants had to go abroad to supply the demand or lose their trade, and thereby diminish the whole silk trade of the country.

When weighted silks (which after all are only goods having a particular finish) were put upon the market, many of the silk manufacturers protested that they would never make such goods. They would stand on the old lines. This was not the way
to appeal to the new class of buyers, who paid no attention to it, but went on buying what they wanted.

The silk-dyers also for a long time maintained this mistaken view. They would not, or could not, dye the weighted silks, till they drove the bulk of the dyeing trade over to Crefeld, and have now a hard struggle to get it back again.

**Want of Technical Education.**

Another great weakness of the silk trade at the time of the Cobden Treaty, and which was also a result of the previous Protection was the indifference to all technical education. In this they were not alone. Many other industries were equally blind to the signs of the times, and suffered accordingly. They were very slow to realise that the change from hand labour to power production which was going on in every trade had destroyed the apprenticeship method of instruction. Under the factory system the workshop was no longer the training school for future manufacturers. Scientific education in industrial methods was necessary if we would hold our position in the world's race.

But not till the ribbon trade had practically left Coventry, was any attempt made to establish a Technical school, and for many years this was the only institution of the kind in the country; while on the Continent great technical schools for silk and silk-dyeing and finishing had been long established.
There were also in America institutions of this class which are not yet equalled in this country.

It is difficult to convince some old thrown silk manufacturers or throwsters that they have anything to learn. The writer was assured by one of them that he had the very best machinery, in proof of which statement he boasted that some of it had been running for eighty years unchanged. This, although an extreme case, is typical. An American would have boasted that he had not a machine in the place that had been running eighty weeks. He does not believe in old machinery. Few improvements on thrown silk machinery have been made in this country. The "Grant Reel," which was a great advantage, is an American invention, as is also nearly all the quick-running and automatic machinery now so much coming into use in many industries. The thrown silk trade, as a trade, never really wakened up to the necessity of technical education.

**Dear Labour a Sign of Prosperity.**

The low price of labour on the Continent is continually quoted as the reason why the British silk manufacturer finds it difficult to compete, and no doubt this is perfectly true.

But this is a factor that all advancing countries must take into account. An industry which can only exist by a supply of poorly-paid labour is in a position requiring reform. It is behind the age.
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Dear labour in our country is not a sign of decay, but of prosperity. It shows that our workers can find employment at better rates. We could not bring down the price of labour, even if this were absolutely necessary in order to save the silk industry. The workers could not be found at the low wages. The price of labour is regulated by the demand for it, and not by the wishes of the silk manufacturers.

But many instances might be quoted to show that dear labour need not stand in the way of producing goods cheaply. Muslins made by cheap Indian labour were at one time imported. Our workers could not have competed, even at starvation wages. But the spinning jenny and the power loom altered everything. Relative to the product, labour is now much cheaper in Lancashire than it is in India, and muslins are now exported to that country.

Advancing countries must avoid competing by means of hand labour. The fact that it was mainly a hand-loom industry was one of the difficulties of the silk trade. The hand looms diminished rapidly, and this is regretted. But why should it be regretted? Progress was involved in the change. The hand-loom weaving was bound to go down, as it did in other textile industries where the Cobden Treaty did not affect it.

The future is with mechanical labour. Automatic machinery is coming fast into use in all directions. The manual labour upon any article will soon be a
most infinitesimal element in its cost. Like the muslin referred to, the trade will go to where the mechanical production is most advanced. America is showing this every day. Labour is scarce and dear there, but the difference is more than made up by the perfection of machinery. It is vain to wail over the cheapness of foreign labour. That cheapness will soon be of no importance. It is to the perfecting of machinery that we must look for progress. The silk trade, and every other trade, will prosper on these lines, and on no others.

Placed in this weak position, the thrown silk trade was unable to stand in open competition, and gradually shrank in volume. Possibly had the trade been wiser and more far-seeing, it need not have succumbed, but the fact remains that it was greatly reduced, and one of the main causes was the weakness begotten of the benumbing influence of Protection.

The wholesale houses being unable to supply the growing demand for cheap and light goods, from home producers, had to look abroad. This is the real reason of the growth of the large silk mercers of the West-end of London, who have given so much employment to dyers, printers, and dressmakers. The new class of buyers wanted fashionable and cheap goods, and had money to buy them; and would have wanted them and bought them, in preference, even if there had been a tariff against them. This is exemplified in America. Certain
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goods of foreign manufacture are the fashion there. The buyers desire them, and continue to buy them, in preference to goods of native production, even although there is a high tariff.

This is why the import of foreign-made silk goods into Britain became large and remains so still. No doubt this is a loss to individual manufacturers, who are not able or willing to compete, but it is not a loss to the country. It is merely a displacement. The market is there yet, and open to all home producers, whenever they can place upon it an article which the buyers wish to buy, at a competitive price.

INDUSTRIES DEPENDENT ON IMPORTED SILK.

The large employment which imported silk goods have given to various industries in this country must not be overlooked, in considering the question of the effect of freedom on the whole silk trade of the country. The silk imported in the form of tram and organzine has to be dyed and woven here, and the large range of selection thus offered to the manufacturers is willingly accepted—a proof that it is an advantage to them. There are numerous branches of silk manufacture and allied industries which could not exist without imported material. Silk-dyeing, for example, would be ruined in this country unless the dyers were allowed freely to purchase dye stuffs in Germany. In doing so they
show that they are the most enlightened and consistent Free Traders in the silk trade. The plush and velvet trades also, depend largely on imported yarns.

Many of the silk textiles imported, especially those from Japan, are in the undyed state, and have afforded great employment to dyers and printers, and created a trade that did not exist before. Many of these silk articles also are used in combination with home-made goods, as trimmings, and increase the sale of such textures.

The spun silk branch, as already mentioned, has grown vigorously, and is now a large and profitable industry, able to hold its own against the world. It can ship to America in the face of a tariff of 35 per cent.

This great extension has taken place since the Cobden Treaty. The industry, therefore, grew up under conditions of freedom, and hence is founded on a solid basis. Yet its progress is less due to Free Trade than to causes that might equally have aided the thrown silk trade had that industry been sufficiently alert. It was the power of the inventor that primarily made the spun silk trade prosperous, notwithstanding the competition of cheap foreign labour.

The Lister comb was not the only, but it was the principal, agent. Invention and improvement have been active in this branch to a degree unknown in the thrown silk trade. By the change from "short"